

REMARKS

Status of the Application

In the Non-final Office Action, claims 28-54 were rejected. In the present Amendment, claims 28, 31, 33, 34, 36-39, 43-47 and 50 have been amended and claim 29 has been cancelled so that claims 28 and 30-54 are pending. No new matter has been added.

Claim 28 has been amended to more clearly define Applicants' claimed process as involving the separation of a single supercritical phase containing a homogenous reaction mixture containing at least one monomer, at least one polymer and the supercritical fluid into at least two supercritical phases comprising a supercritical phase I containing the at least one polymer and supercritical fluid and a supercritical phase II containing the at least one monomer and a supercritical fluid. Support for this amendment can be found in original claims 1 and 2, page 2, lines 18-25, page 3, lines 1-3, page 5, lines 34-35, and page 6, lines 14-19.

Any additional amendments of claim 28 were made for clarity and/or format reasons only and NOT for reasons related to patentability.

Claim 31 was amended for clarity reasons only and NOT for any reason related to patentability. Support for this amendment can be found in original claim 4, page 4, lines 33-36 and page 9, lines 24-26.

Claim 33 was amended for clarity reasons only and NOT for any reason related to patentability. Support for this amendment can be found in original claim 6 and page 5, lines 22-29.

Claim 34 was amended for clarity reasons only and NOT for any reason related to patentability. Support for this amendment can be found in original claims 7 and 8, page 6, lines 32-33, and page 9, lines 16-17.

Claim 36 was amended for clarity reasons only and NOT for any reason related to patentability. Support for this amendment can be found in original claim 10, page 6, lines 18-31, and page 8, lines 23-24.

Claim 37 was amended for clarity reasons only and NOT for any reason related to patentability. Support for this amendment can be found in original claim 10.

Claim 38 was amended for clarity reasons only and NOT for any reason related to patentability. Support for this amendment can be found in original claim 11, page 2, lines 32-33, page 6, lines 33-35, and page 9, lines 10-12.

Claim 39 was amended for clarity reasons only and NOT for any reason related to patentability. Support for this amendment can be found in original claim 12.

Claim 43 was amended for the same reasons as set forth hereinabove regarding claim 28. Support for this amendment can be found in original claim 15, page 2, lines 18-25, page 3, lines 1-3, page 5, lines 34-35, page 6, lines 14-19, page 7, lines 4-7, 12-17, and 22-28, and page 8, lines 11-12.

Any additional amendments of claim 43 were made for clarity and/or format reasons only and NOT for reasons related to patentability.

Claim 44 was amended for clarity reasons only and NOT for any reason related to patentability. Support for this amendment can be found in original claim 15.

Claim 45 was amended for clarity reasons only and NOT for any reason related to patentability. Support for this amendment can be found in original claim 16.

Claim 46 was amended for clarity reasons only and NOT for any reason related to patentability. Support for this amendment can be found in original claim 17.

Claim 47 was amended for clarity reasons only and NOT for any reason related to patentability. Support for this amendment can be found in original claim 18.

Claim 50 was amended for grammatical reasons only and NOT for any reason related to patentability.

Rejections Under 35 U.S.C §102(e)

Claims 28-30 and 32-54 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,340,722 to Lee.

More specifically, the Examiner asserts that "Lee et al. disclose polymerization processes for the production of polymeric powder coating materials" that "comprise the use of supercritical fluids at temperatures up to 190° C and pressures from 72.9 atm to 272 atm." The Examiner further asserts that "[t]he monomers suitable for polymerization include epoxies, esters, acrylics and mixtures thereof with specific embodiments to copolymers of acrylic monomers", and that "[t]he incorporation of additional adjuvants such as crosslinkers (hardeners),

pigments, light stabilizers etc. is taught at column 9, lines 28-35.” Lastly, the Examiner asserts that “[s]ubsequent processing of the reaction mixture, which includes pressure and temperature variation, to separate polymer from monomer and monomer from fluid is taught at column 8, line 21 to column 9, line 15.”

Applicants, however, respectfully submit that as Lee does not disclose that supercritical fluid, pressure, temperature, or combinations thereof can be adjusted so as to separate a single supercritical phase containing monomer, supercritical fluid, and polymer into two supercritical phases, wherein one of the supercritical phases contains polymer and supercritical fluid and the other contains monomer and supercritical fluid, Lee does not anticipate Applicants’ claimed invention.

Indeed, Lee expressly indicates at column 8, lines 58-65 that

“When the reaction is complete, the temperature and pressure of the supercritical fluid are stepwise reduced until they are dropped below the critical temperature and the critical pressure. At this point, there is no more solvating power so the unreacted monomer separates from the fluid. The fluid and unreacted monomer are then removed from the polymer and separated by changing the temperature and pressure of the supercritical fluid so that it reverts to a gas state.”

(emphasis added). As the Examiner can see, the monomer and supercritical fluid are NOT separated from the polymer until AFTER they leave the supercritical phase. In contrast, Applicants’ claimed invention enables the monomer and polymer to be separated while they are both still in the supercritical phase. As a result, Lee does not anticipate Applicants’ claimed invention. Accordingly, Applicants respectfully request that the Examiner withdraw this rejection.

Rejections Under 35 U.S.C §103(a)

Claim 31 stands rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,340,722 to Lee.

The Examiner asserts that “Lee et al. disclose processes for the production of powder coating materials as discussed above.” The Examiner, however, correctly notes that Lee fails to explicitly recite the use of three or more monomers, but asserts that Lee’s reference to “mixtures thereof” at column 7, line 45, renders Applicants’ claimed combination of three monomers obvious.

Applicants, however, respectfully submit that Applicants' claimed invention is not obvious in light of Lee for the same reasons as already set forth hereinabove. Specifically, Lee fails to teach or suggest a process for producing a polymer powder in accordance with Applicants' claimed invention, wherein a monomer and polymer can be separated from each other while the monomer and polymer are both still in the supercritical phase. That is, Lee fails to teach or suggest that the supercritical fluid, pressure, temperature, or combinations thereof can be adjusted so as to separate a single supercritical phase containing monomer, supercritical fluid, and polymer into two separate supercritical phases, wherein one of the phases contains monomer and supercritical fluid and the other contains polymer and supercritical fluid, and that these phases can be further separated from each other thereby enabling the polymer and monomer to be precipitated out of the supercritical phase in an already separated state.

In contrast, Lee indicates that his polymer and monomer are not separated from each other until after leaving the supercritical state, and certainly never mentions that the single supercritical phase containing his monomer and polymer can be separated into two separate supercritical phases wherein one phase contains polymer and supercritical fluid and the other contains monomer and supercritical fluid by adjusting the supercritical fluid, pressure, temperature, or combinations thereof. As Lee fails to disclose the more simplified and comfortable method of separation achieved by Applicants' claimed invention, Lee does not render Applicants' claimed invention obvious.

Indeed, Section 2143.03 of Revision I of the Eighth Edition of the MPEP indicates that "all the claim limitations must be taught or suggested by the prior art" to establish a *prima facie* case of obviousness. As Applicants have explained hereinabove, Lee does not teach or suggest ALL of the limitations of Applicants' claimed invention, and therefore the Examiner has not established a *prima facie* case of obviousness.

For all of the reasons set forth hereinabove, Applicants respectfully request that the Examiner withdraw this rejection.

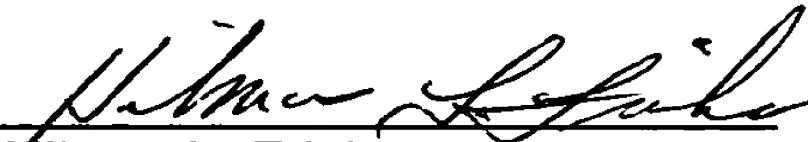
Summary

In view of the foregoing amendments and remarks, Applicants respectfully submit that this application is in condition for allowance and solicit a Notice of

Application No. 09/935,619
Case No. FA 0890

Allowance. In order to expedite disposition of this case, the Examiner is invited to contact Applicants' representative at the telephone number below to resolve any remaining issues. Should there be a fee due which is not accounted for, please charge such fee to Deposit Account No. 04-1928 (E.I. du Pont de Nemours and Company).

Respectfully submitted,

By 
Hilmar L. Fricke
Reg. No. 22,384
Phone 302 984-6058
Facsimile 302 658-1192

Date: April 21, 2004